

**DONAKER ESTATES
FIVE-LOT MINOR SUBDIVISION**

STAFF REPORT FOR BOARD OF COUNTY COMMISSIONERS (BCC)

CASE PLANNER: Tristan Riddell *TR*

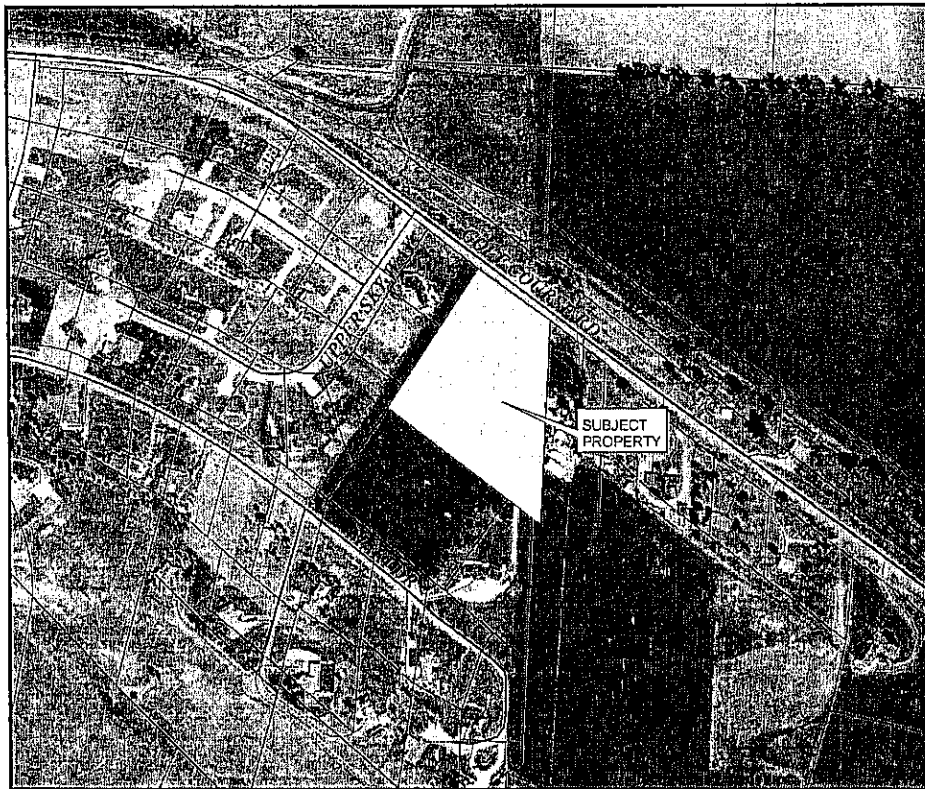
**REVIEWED/
APPROVED BY:** Renee Van Hoven *W*

PUBLIC MEETING: BCC Public Meeting: 9:00 a.m. October 23, 2007
Deadline for BCC action: October 31, 2007

SUBDIVIDER: Rudy & Bernice Kratofil
545 Golf Course Road
Hamilton, MT 59840

REPRESENTATIVE: Shepherd Surveying
Leonard Shepherd
320 Adirondac
Hamilton, MT 59840

LOCATION OF REQUEST: The property is located southeast of Hamilton off Golf Course Road.
(See Map 1)



Map 1: Location Map
(Source Data: Ravalli County GIS Department)

**LEGAL DESCRIPTION
OF PROPERTY:**

A portion of the E ½ Section 32, T6N, R20W, P.M.M., Ravalli
County, Montana.

**APPLICATION
INFORMATION:**

The subdivision application was determined complete on September
11, 2007. Agencies were notified of the subdivision and comments
received by the Planning Department not included in the application
packet are Exhibits A-1 and A-4 of the staff report.

LEGAL NOTIFICATION:

Notice of the project was posted on the property and adjacent
property owners were notified by certified mail postmarked
September 21, 2007.

**APPLICABLE
REGULATIONS:**

The proposal is being reviewed under the Ravalli County Subdivision
Regulations (RCSR), as amended May 24, 2007.

**DEVELOPMENT
PATTERN:**

Subject property	Agricultural Rural
North	Agricultural Rural
South	Residential Rural
East	Residential Rural
West	Residential Rural

INTRODUCTION

The Donaker Estates minor subdivision is a five-lot residential proposal on 5.03 acres located
approximately two miles southeast of Hamilton. The property is currently vacant. Each lot is
proposed to have individual well and septic systems.

Staff recommends conditional approval of the subdivision.

RAVALLI COUNTY BOARD OF COUNTY COMMISSIONERS
OCTOBER 23, 2007

DONAKER ESTATES
FIVE-LOT MINOR SUBDIVISION

RECOMMENDED MOTION

That the Donaker Estates minor subdivision be **approved**, based on the findings of fact and conclusions of law in the staff report, and subject to the conditions in the staff report.

RECOMMENDED MITIGATING CONDITIONS OF APPROVAL FOR THE SUBDIVISION

1. A document entitled "Notifications to Future Property Owners" that includes the following notifications and attachments shall be included in the submittal of the final plat to the Planning Department and filed with the Clerk & Recorder's Office:

Notification of Proximity to Agricultural Operations. This property is located near existing agricultural activities. Some may find activities associated with normal agricultural activities objectionable and dangerous. (*Effects on Agriculture*)

Limitation of Access onto a County Road. A "no-ingress/egress" restriction exists along the Golf Course Road frontage of this property, excepting the approved approach for the internal subdivision road, [insert road name here]. All units on this property must use this approved approach. This limitation of access may be lifted or amended only with the approval of the Ravalli County Board of County Commissioners. (*Effects on Local Services and Public Health & Safety*)

Notification of Road Maintenance Agreement. The internal subdivision road [insert road name here] is not maintained by Ravalli County, the State of Montana, or any other governmental entity. Neither the County nor the State assumes any liability for lacking or improper maintenance. A Road Maintenance Agreement for this road was filed with the Clerk & Recorder's Office and outlines which parties are responsible for maintenance and under what conditions. (*Effects on Local Services*)

Notification of Irrigation Facilities and Easements. On this property there are irrigation easements, as shown on the final plat. All downstream water-right holders have the right to maintain and repair their irrigation facilities whenever necessary to keep them in good condition. Maintenance of the ditch may include the use of motorized construction equipment, fire, and/or herbicides. The filed subdivision plat shows the irrigation easements on the property. The downstream water rights holders must approve any relocation or alteration (e.g. installation of a culvert) of irrigation ditches/pipelines. Any act that damages or destroys a ditch, interferes with its operation or maintenance in any way, or restricts access to the ditch so as to interfere with its maintenance is expressly prohibited. The downstream water right holders have the right to use the easements to maintain the ditches. (Include a reduced copy of the final plat as an exhibit) (*Prerequisites to Approval and Effects on Agricultural Water User Facilities*)

Notification of Proximity to Public Airport. This subdivision is located near the Ravalli County Airport. Standard operation of the airport creates noise levels that some people may find objectionable. In addition, there are inherent hazards to nearby properties associated with aircraft operations. (*Effects on Local Services and Public Health & Safety*)

Notification of Severe Soils. On this property there are areas identified by the Natural Resources Conservation Service (NRCS) as potentially having soils rated as severe for road construction and building sites. The approximate locations of these areas can be found on a reduced copy of the final plat. Descriptions of the severe soils in question are included as exhibits to this document [the subdivider shall include the exhibits as attachments]. (*Effects on Public Health & Safety*)

2. The following protective covenants for this property shall be submitted with the final plat and filed with the Clerk & Recorder's Office. The subdivider should include a copy of the covenants with a rental or lease agreement for each unit. The covenants shall include the following provisions:

Living with Wildlife. (See Exhibit A-1 for required provisions.) (*Effects on Wildlife & Wildlife Habitat*)

Lighting for New Construction. To promote public health and safety, reduce energy consumption, and reduce impacts to nocturnal wildlife, full cut-off lighting is recommended for any new construction on this property. A full cut-off fixture means a fixture, as installed, that is designed or shielded in such a manner that all light rays emitted by the fixture, either directly from the lamps or indirectly from the fixture, are projected below a horizontal plane through the lowest point on the fixture where light is emitted. The source of light should be fully shielded on the top and sides, so as not to emit light upwards or sideways, but only allowing light to shine down towards the subject that is to be lighted. For more information, visit www.darksky.org. (*Effects on Natural Environment, Wildlife and Wildlife Habitat, and Public Health & Safety*)

Wood Stoves. The County recommends that home owners install EPA-certified wood stoves to reduce air pollution. More information is available at <http://www.epa.gov/woodstoves/index.html>. The State of Montana offers an Alternative Energy Systems Credit for the cost of purchasing and installing a low emission wood or biomass combustion device such as a pellet or wood stove. (*Effects on Natural Environment*)

Radon Exposure. The owner understands and accepts the potential health risk from radon concentrations, which are presently undetermined at this location. Unacceptable levels of radon can be reduced through building design and abatement techniques incorporated into structures. Property owners are encouraged to have their buildings tested for radon. Contact the Ravalli County Environmental Health Department for further information. (*Effects on Public Health & Safety*)

Control of Noxious Weeds. A weed control plan has been filed in conjunction with this subdivision. The property owner shall control the growth of noxious weeds on the property. Contact the Ravalli County Weed District for further information. (*Effects on Agriculture and Natural Environment*)

Required Posting of County-Issued Addresses for Lots within this Subdivision. The Hamilton Rural Fire District has adopted the Fire Protection Standards, which require lot owners to post County-issued addresses at the intersection of the driveway leading to each residence and the road providing access to the lot as soon as construction on the residence begins. (*Effects on Local Services and Public Health & Safety*)

Access Requirements for Lots within this Subdivision. The Hamilton Rural Fire District has adopted the Fire Protection Standards. All accesses, including driveways to residences over 150' in length, must have a minimum unobstructed travel surface width of 22', a vertical

clearance of 13'6" and an all-weather surface that can accommodate the weight of a fire truck. Please contact the Hamilton Rural Fire District for further information. *(Effects on Local Services and Public Health & Safety)*

Recommended Building Standards. The Hamilton Rural Fire District recommends that buildings on this property be built to International Residential Building Code (IRBC) building standards. For more information, contact the Hamilton Rural Fire District at PO Box 1994, Hamilton, MT 59840. *(Effects on Local Services and Public Health & Safety)*

Airport Influence Area. This subdivision is located within the Airport Influence Area, as established by Resolution #1302, adopted by the Board of County Commissioners on November 27, 2002. Resolution #1366, adopted by the Board of County Commissioners on November 20, 2003, established the Airport Influence Area Regulations. Lots within this subdivision are subject to these Regulations, and any future amendments thereof. Please be advised that these Regulations state, among other things, that "No material change may be made in the use of the land and no structure or tree may be erected, altered, planted, or otherwise established in the Airport Influence Area, unless a permit for the use has been granted." *(Effects on Local Services, Public Health & Safety, and Compliance with Applicable Regulations)*

Amendment. Written governing body approval shall be required for amendments to provisions of the covenants that were required to be included as a condition of subdivision approval. *(Effects on all six criteria)*

3. The subdividers shall include an RSID/SID waiver in a notarized document filed with subdivision plat that states the following: Owners and their successors-in-interest waive all rights in perpetuity to protest the creation of a city/rural improvement district for any purpose allowed by law, including, but not limited to a community water system, a community wastewater treatment system, and improving and/or maintaining the roads that access the subdivision including related right-of-way, drainage structures, and traffic control signs. *(Effects on Local Services)*
4. The subdivider shall submit a letter or receipt from the Hamilton School District stating that they have received (an amount to be determined by the Board of County Commissioners in Consultation with the Subdivider)-per-lot contribution prior to final plat approval.. *(Effects on Local Services)*
5. Prior to final plat approval, the subdividers shall provide a letter from the Hamilton Rural Fire District stating that the subdividers have provided the required 1,000 gallon-per-minute water supply or 2,500 gallon-per-lot water storage for fire protection for each lot within this subdivision. Alternatively, the subdividers may provide evidence that a \$500-per-lot contribution has been made to the Hamilton Rural Fire District with the final plat submittal in lieu of the required water supply or water storage for fire protection. *(Effects on Local Services and Public Health & Safety)*
6. The following statement shall be shown on the final plat: "The Hamilton Rural Fire District has adopted the Fire Protection Standards. All accesses, including driveways to residences over 150' in length, must have a minimum unobstructed travel surface width of 22', a vertical clearance of 13'6" and an all-weather surface that can accommodate the weight of a fire truck. Please contact the Hamilton Rural Fire District for further information". *(Effects on Local Services and Public Health & Safety)*

7. The subdivider shall submit an (amount)-per-lot contribution to the Ravalli County Treasurer's Office to be deposited into account for the Sheriff's Office prior to final plat approval. *(Effects on Local Services and Public Health and Safety)*
8. The Road Maintenance Agreement for Rudy's Way shall state that other parcels that may have beneficial use of the road shall be allowed to join as members of the agreement without the consent of the current members. *(Effects on Local Services)*
9. The subdivider shall provide evidence with the final plat submittal that they have applied for County-issued addresses for each lot within this subdivision. *(Effects on Local Services and Public Health & Safety)*
10. The final plat shall show a no-ingress/egress zone along the Golf Course Road frontage of the subdivision, excepting the approach for the internal road, as approved by the Road and Bridge Department. *(Effects on Local Services and Public Health and Safety)*
11. The internal subdivision road shall be labeled as a "public road and utility easement" on the final plat. *(Effects on Local Services)*
12. Stop signs and road name signs shall be installed at the intersection of all roads prior to final plat approval. *(Effects on Local Services and Public Health and Safety)*
13. An Avigation Easement shall be granted by the subdivider to Ravalli County and recorded with the Clerk and Recorder's Office concurrent with the filing of the final plat, unless written evidence from the Airport Board is provided indicating that an Avigation Easement is not necessary. *(Effects on Local Services and Public Health and Safety)*
14. The following statement shall be included on the final plat: "This subdivision lies within the Ravalli County Airport Influence Area and is subject to the Ravalli County Airport Influence Area Regulations". *(Effects on Local Services and Public Health & Safety)*
15. *The applicant shall provide evidence that a public road and utility easement covering the portion of the turnaround for Rudy's Way has been granted by the owners of Parcel D of COS#548660 (Effects on Local Services and Public Health and Safety)*

SUBDIVISION REPORT

COMPLIANCE WITH PREREQUISITES TO APPROVAL

Section 3-2-8(a) of the RCSR states that the BCC shall not approve or conditionally approve a subdivision application and preliminary plat unless it is established by credible evidence that the proposed subdivision meets the following requirements:

A. Provides easements for the location and installation of any planned utilities.

Findings of Fact

1. The preliminary plat indicates that existing utility easements are located along the Golf Course Road frontage of the subdivision. Utility easements are proposed along the internal subdivision road.
2. According to the preliminary plat application, a 2-inch natural gas service line and associated 10-foot easement are located along the eastern property boundary of proposed Lot 5.
3. Section 3-4-4(a)(ii) of the RCSR requires that the existing and proposed utility easements are shown on the final plat.

Conclusion of Law

The proposed subdivision application provides for utility easements.

B. Provides legal and physical access to each parcel within the subdivision and the notation of that access is included on the applicable plan and in any instrument transferring the parcel.

Findings of Fact

1. The subject property is accessed by US Highway 93, Golf Course Road, and the internal subdivision road, Rudy's Way.
2. Golf Course Road is listed as a County-maintained road in Exhibit A of the RCSR.
3. According to the preliminary plat application, the applicant is proposing to construct an internal road, Rudy's Way, to meet County standards. The road plans have received preliminary approval (Exhibit A-1). Section 3-4-4 requires final road plans, road certifications, and final approval from the Road Department that the roads were constructed to meet County standards prior to final plat approval.
4. According to the preliminary plat application, the applicant is proposing a 60-foot wide road easement for Rudy's Way. The road is proposed to terminate on Parcel D of Certificate of Survey 548660. Section 3-4-4(a)(ii) of the RCSR requires that public road and utility easements are shown on the final plat.

Conclusion of Law

Legal and physical access is provided on Golf Course Road and proposed Rudy's Way.

C. Assures that all required public or private improvements will be installed before final plan approval, or that their installation after final plan approval will be guaranteed as provided by Section 3-4-2 of the RCSR.

Findings of Fact

1. The subdivider is proposing to construct an internal road, Rudy's Way.
2. Section 3-4-4(a)(xxvi) requires that the subdivider submit evidence that improvements have been made in accordance with the conditions of approval and requirements of final plat approval and certified by the subdivider prior to final plan approval.

Conclusion of Law

The final plat requirements or an improvements agreement and guaranty will ensure that all improvements are installed.

D. Assures that the requirements of 76-3-504(1)(j), MCA, regarding the disclosure and disposition of water rights as set forth in Chapter 5 have been considered and will be accomplished before the final plat is submitted.

Finding of Fact

1. The application states that the property has water shares through the Daly Ditches Irrigation District, and that the shares will be divided among the newly created lots.
2. The Daly Ditches Irrigation District acts as a single entity in distributing water shares.
3. A letter from Daly Ditches approving the reallocation of water shares is included in the preliminary plat application.

Conclusion of Law

Since the property is within the Daly Ditches Irrigation District and the proposal has received the Irrigation District's approval, this requirement has been met.

E. Assures that the requirements of 76-3-504(1)(k) MCA, regarding watercourse and irrigation easements as set forth in Chapter 5 have been considered and will be accomplished before the final plan is submitted.

Findings of Fact

1. According to the application and the preliminary plat, there is a proposed 10-foot wide irrigation easement traversing the southern portion of Lot 4.
2. Section 3-4-4(a)(ii)(V) requires that irrigation easements are shown on the final plat.
3. The placement of structures or the planting of vegetation other than grass within ditch easements is prohibited in 76-3-504(1)(k) MCA, without the written permission of the downstream water users. To meet this requirement, the subdivider shall place a notification in the Notifications Document that permission from the downstream water users is required for any alterations within the irrigation easement. (*Condition 1*)

Conclusion of Law

With the requirements of final plat approval and a condition requiring a notification that permission from the downstream water users is required for any alterations within the easement, this requirement will be met.

F. Provides for the appropriate park dedication or cash-in-lieu, if applicable.

Finding of Fact

Chapter 6 of the RCSR allows for either a land donation/dedication or cash-in-lieu of parkland donation/dedication for minor subdivisions beginning October 1, 2007, as amended in MCA 76-3-621. This proposal was deemed sufficient prior to that date. There is no parkland requirement associated with this proposal.

Conclusion of Law

Parkland donation/dedication is not required for this proposal.

G. Overall Findings and Conclusions on Prerequisite Requirements

With the conditions and requirements of final plat approval, there is credible evidence that the subdivision application meets the prerequisite requirements.

COMPLIANCE WITH APPLICABLE REGULATIONS

Section 3-2-8(b) of the RCSR states that in approving, conditionally approving, or denying a subdivision application and preliminary plat, the BCC shall ensure the subdivision application meets Section 3-2-8(a) above, and whether the proposed subdivision complies with:

A. These regulations, including, but not limited to, the standards set forth in Chapter 5.

Finding of Fact

The Ravalli County Planning Department has reviewed this proposal in compliance with the procedures provided in Chapter 3 of the Ravalli County Subdivision Regulations. With the conditions and requirements of final plat approval for the subdivision, the application will meet the design standards in Chapter 5.

Conclusions of Law

1. With the conditions and requirements of final plat approval for the subdivision, the preliminary plat and subdivision application meet all applicable standards required in the RCSR.
2. The procedures for the application and review of this proposed subdivision, as outlined in Chapter 3 of the RCSR, have been followed.

B. Applicable zoning regulations.

Findings of Fact

1. This subdivision is subject to the settlement agreement filed in the *Lords et al. v. Ravalli* County lawsuit regarding the Interim Zoning Regulations enacted November 7, 2006 [Resolution 2038] and may be affected by future actions resulting from said settlement.
2. The subdivision is not located within a Voluntary Zoning District.

Conclusion of Law:

Zoning does not apply at this time.

C. Existing covenants and/or deed restrictions.

Finding of Fact

Covenants as recorded in Book 136 Page 168 (and subsequent amendments) no longer effect the subject property. On November 9, 2006 an agreement was filed (Document #580145) removing the subject property from the Skyline Homeowners Association and all associated covenants.

Conclusion of Law

There are no covenants associated with the subject property.

D. Other applicable regulations.

Findings of Fact

1. Following are applicable regulations:
 - Montana Subdivision and Platting Act, Title 76, Chapter 3, MCA
 - Montana Sanitation in Subdivisions Act, Title 76, Chapter 4, MCA
 - Ravalli County Subsurface Wastewater Treatment and Disposal Regulations
 - Montana Standards for Subdivision Storm Drainage (DEQ Circular 8)
 - Applicable laws and policies requiring permits related to development (U.S. Army Corps of Engineers, Bitterroot Conservation District, Ravalli County Road & Bridge Department, Montana Department of Transportation, Montana Department of Environmental Quality, etc.)

- Airport Influence Area
- 2. The subdivider was made aware of the applicable regulations at the updated pre-application conference held on June 20, 2007.

Conclusion of Law

The application appears to meet all of the applicable regulations.

E. The MSPA, including but not limited to an evaluation of the impacts of the subdivision on the following criteria:

CRITERION 1: EFFECTS ON AGRICULTURE

Findings of Fact:

1. The property is located approximately two miles southeast of the City of Hamilton off Golf Course Road. According to the Montana Cadastral Database created by the Montana Department of Administration Information Technology Services Division Geographic Information Services, the parcels surrounding the property are classified as agricultural rural or residential rural for tax purposes. From the Montana Cadastral Database, the 2004 aerial photograph, and preliminary plat, it appears that the parcels to the north and southeast of the subdivision property may be used for agriculture.

To mitigate impacts on agriculture, a notification of proximity to agricultural operations shall be included in the notifications document filed with the Ravalli County Clerk & Recorder's Office. (Condition 1)

2. There are no soils listed as Prime Farmland or Farmland of Statewide Importance by the Natural Resources Conservation Service (Source: U. S. Department of Agriculture, Natural Resources Conservation Service – 6/11/96) located on the property.
3. The Planning Department received an approved Ravalli County Subdivision Noxious Weed Evaluation Form from the Ravalli County Weed District that states Spotted Knapweed is located on the property. (Application) This is considered a Category 1 noxious weed. According to MCA 7-22-2152, any person proposing a development that needs state or local approval and that results in the potential for noxious weed infestation within a weed district shall notify the weed board at least 15 days prior to activity. Consequently, 15 days prior to activities requiring a revegetation plan, such as road construction, the plan shall be submitted to the weed board for approval by the board. The subdivider will include a provision in the covenants that the owners of each lot control noxious weeds.

To mitigate impacts on agriculture, a noxious weed control provision shall be included in the protective covenants filed with the final plat for this subdivision. (Condition 2)

Conclusion of Law:

With the mitigating conditions and requirements of final plat approval, impacts of the subdivision on agriculture will be reduced.

CRITERION 2: EFFECTS ON AGRICULTURAL WATER USER FACILITIES

Findings of Fact

1. According to the application and the preliminary plat, there is a proposed 10-foot wide irrigation easement that traverses the southern portion of Lot 4.

The following requirement and condition will mitigate impacts on agricultural water user facilities:

- Section 3-4-4(a)(ii)(V) requires that the 10-foot wide irrigation easement is shown on the final plat.
 - A notification stating that the irrigation easement is located on the property and downstream water users must approve relocations or alterations of the irrigation pipeline shall be filed with the Clerk & Recorder. (Condition 1)
2. According to the application, this property has water shares through the Daly Ditches Irrigation District. The subdivider is proposing to divide the water shares between the newly created lots. Daly Ditches has approved the reallocation of water.

Conclusion of Law:

With the mitigating conditions of approval and requirements of final plat approval, impacts on agricultural water user facilities will be reduced.

CRITERION 3: EFFECTS ON LOCAL SERVICES

Findings of Fact:

1. The subdivision is located within the Hamilton Rural Fire District. The Hamilton Rural Fire District adopted Fire Protection Standards on September 6, 2005 (Exhibit A-3).

The following conditions will mitigate impacts of the subdivision on the Fire District:

- A provision in the covenants recommends that all the buildings within the subdivision be built to International Residential Building Codes. (Condition 2)
 - The applicant shall provide adequate water supply or a \$500 per lot contribution, as approved by the Fire District. (Condition 5)
 - The subdivider shall apply for County-issued addresses and a provision requiring property owners to post County-issued addresses at their driveways shall be in the covenants. (Conditions 2 and 9)
 - The following statement shall be shown on the final plat: "The Hamilton Rural Fire District has adopted the Fire Protection Standards. All accesses, including driveways to residences over 150' in length, must have a minimum unobstructed travel surface width of 22', a vertical clearance of 13'6" and an all-weather surface that can accommodate the weight of a fire truck. Please contact the Hamilton Rural Fire District for further information". The statement shall also be included in the covenants. (Conditions 2 and 6)
2. With this subdivision, it is estimated that approximately 2.5 school-aged children will be added to the Hamilton School District, assuming an average of .5 children per single family residence (Source: Census 2000).
3. The subdividers stated they will make a voluntary contribution to the School District, but did not specify an amount.
4. The Hamilton School District was notified of the subdivision proposal. To date the Planning Department has not received any comments specific to this proposal.

To mitigate impacts on the School District, the applicant shall submit a letter or receipt from the Hamilton School District stating that they have received a (amount)-per-lot contribution prior to final plat approval. (Condition 4) (Staff Note: Since the applicants and the School District did not agree on an amount, staff recommends that the BCC negotiate an amount with the applicants and include the appropriate finding(s) supporting the amount in their decision.)

5. Individual wells and wastewater treatment systems are proposed to serve the lots. The property is not near any municipal water or wastewater systems.

6. The Ravalli County Sheriff's Office provides law enforcement services to this area. No comments have been received by the Sheriff's Office. The current level of service is not known, but it is generally understood that the Sheriff's Office is operating at an inadequate level of service. The applicant is not proposing any mitigation.

To mitigate impacts on the law enforcement, the subdivider shall submit a (amount)-per-lot contribution to the Ravalli County Treasurer's Office to be deposited into account for the Sheriff's Office prior to final plat approval. (Condition 7) (Staff Note: Since the current or planned level of service for the Sheriff's Office is unknown and the applicant has not proposed any mitigation, Staff recommends the BCC negotiate an amount per lot with the applicants and include the appropriate finding(s) supporting the amount in their decision.)

7. Ambulance services will be provided by Marcus Daly Memorial Hospital EMS Department. No comments have been received from this entity.
8. Bitterroot Disposal provides service to this site.
9. The application states that Qwest and Ravalli County Electric Co-Op will provide utilities to the new units. There is an existing public utility easement on Golf Course Road and a proposed 60-foot wide road and utility easement along Rudy's Way.

Section 3-4-4(a)(ii)(V) requires that the existing and proposed utility easements are shown on the final plan.

10. There are five proposed single-family residential lots within this subdivision. It is estimated at build-out that this subdivision will generate a total of 40 vehicular trips per day, assuming 8 trips per day per single-family dwelling.
11. Golf Course Road is a County-maintained road providing access to the subdivision.

To mitigate impacts on the off-site road leading to the subdivision, the following conditions and requirement shall be met:

- *Section 5-4-5(d) requires the applicant to pay the pro rata share of the cost to improve the portion of Golf Course Road leading to the subdivision to meet County standards.*
- *Section 3-4-4(a)(xiii) requires that the subdivider submit an approved approach permit from the Ravalli County Road and Bridge Department for the approach off Golf Course Road..*
- *The final plan shall show a no-ingress/egress zone along the Golf Course Road frontage of the subdivision, excepting the approach for Rudy's Way, as approved by the Ravalli County Road and Bridge Department. A notification of this limitation of access shall be included in the notifications document. (Conditions 1 and 10)*

12. The subdivider is proposing to construct an internal subdivision road to provide access to all lots within the subdivision. The application packet states that the internal road is proposed to meet County standards. The road plans have received preliminary approval from RCRBD (Exhibit A-1).
13. A preliminary Road Maintenance Agreement was included in the preliminary plat application.

To ensure that future lot owners have adequate access and to mitigate impacts on local services, the following requirements and conditions shall be met:

- *A copy of the General Discharge Permit for Stormwater Associated with Construction Activity from the DEQ, evidence of a Ravalli County-approved road name petition for each new road, final road plans and grading and storm water drainage plan, road certifications, and a signed/notarized road maintenance agreement, and evidence that road*

improvements have been made in accordance with the conditions of approval and requirements of final plat approval are required by Section 3-4-4(a) of the RCSR prior to final plat approval.

- The final plat application packet is required to include a road maintenance agreement for Rudy's Way that meets the requirements of the Ravalli County Subdivision Regulations per Section 3-4-4(a)(xix). A notification of the road maintenance agreement shall be included in the notifications document filed with the Clerk & Recorder's Office. (Condition 1)
- The 60-foot wide easement for Rudy's Way shall be labeled as a public road and utility easement on the final plat. (Condition 11)
- The applicant shall provide evidence that a public road and utility easement covering the portion of the turnaround for Rudy's Way has been granted by the owners of Parcel D of COS#548660. (Condition 15)
- A stop sign and road name sign shall be installed at the intersection of Golf Course Road and Rudy's Way. (Condition 12)
- To avoid duplication of road maintenance between the future owner(s) of this property and other properties to the south, which may have access, the Road Maintenance Agreement for Rudy's Way filed with the Clerk & Recorder's Office shall allow for other properties that have beneficial use of the internal subdivision road to be included as parties to this agreement without the consent of the property owners within this lot. (Condition 8)

14. The proposed subdivision is within the Ravalli County Airport Influence Area. Avigation easements are commonly used by airports to provide an easement and right-of-way for unobstructed passage of aircraft in, through, and across the airspace above the Grantor's property at a certain elevation.

To mitigate impacts on local services, the following requirements and conditions shall be met:

- An Avigation Easement, approved by the Ravalli County Airport Board, shall be granted by the subdivider to Ravalli County, unless written evidence from the Airport Board is provided indicating that an Avigation Easement is not necessary. (Condition 13)
- A notification of the proximity to the airport shall be included in the notifications document and on the final plat. The covenants shall include a provision regarding Airport Regulations. (Conditions 1, 2, and 14)

15. There are not currently any known RSID/SID districts affecting this property.

To mitigate potential impacts of this subdivision on any possible future public water, sewer system, or improvements to the road system, the RSID/SID waiver filed with the final plan shall address these services/facilities. (Condition 3)

Conclusion of Law:

With the mitigating conditions of approval and requirements of final plan approval, impacts of the subdivision on local services will be reduced.

CRITERION 4: EFFECTS ON NATURAL ENVIRONMENT

Findings of Fact:

1. In an email dated January 10, 2007 (Exhibit A-2), the Montana Department of Environmental Quality (DEQ) identified the Hamilton and Missoula areas as communities with a high probability of failing to meet the recently revised National Ambient Air Quality Standards for particulate matter. Sources of particulate from this subdivision could be vehicles and wood-burning stoves. The applicant is proposing to construct the internal road to meet County standards, which includes pavement.

To mitigate impacts on the natural environment, a recommendation for EPA-certified wood stoves shall be included in the covenants. (Condition 2)

2. The applicants are proposing individual wells and wastewater facilities. The applicants submitted water and sanitation information per MCA 76-3-622. The Ravalli County Environmental Health Department provided documentation indicating that they have received adequate information for local subdivision review to occur (Exhibit A-3).

Section 3-4-4(a)(ix) requires a DEQ Certificate of Subdivision Approval prior to final approval.

3. The addition of homes in an area that currently has lower density development has the potential to create light pollution. Sky glow, glare, light trespass into neighbor's homes, and energy waste are some of the components of light pollution.

To mitigate the impacts of light pollution stemming from new construction, the protective covenants shall include a provision recommending full cut-off lighting on new construction. (Condition 2)

4. The Planning Department received an approved Ravalli County Subdivision Noxious Weed Evaluation Form from the Ravalli County Weed District that states Spotted Knapweed is located on the property. (Application) This is considered a Category 1 noxious weed. According to MCA 7-22-2152, any person proposing a development that needs state or local approval and that results in the potential for noxious weed infestation within a weed district shall notify the weed board at least 15 days prior to activity. Consequently, 15 days prior to activities requiring a revegetation plan, such as road construction, the plan shall be submitted to the weed board for approval by the board. The subdivider will include a provision in the covenants that the owners of each lot control noxious weeds.

To mitigate impacts on the natural environment, a noxious weed control provision shall be included in the protective covenants filed with the Clerk & Recorder's Office. (Condition 2)

5. Both the State Champion Tree and Palish Sedge were identified by the Montana Natural Heritage Program as plant species of concern within the same section as the subject property, but because there were no signs of the plants present on the property, the subdivider requested and received a waiver from the requirement to submit a sensitive species report.

Conclusion of Law:

Impacts from this subdivision on the natural environment will be reduced with the mitigating conditions and requirements of final plat approval.

CRITERION 5: EFFECTS ON WILDLIFE & WILDLIFE HABITAT

Findings of Fact:

1. Recommendations and comments from Fish, Wildlife & Parks from a letter dated September 13, 2005, (Exhibit A-4) are summarized as follows:
 - a) The property is located near agricultural lands, natural drainage features to the north and south, the Hedge Ditch to the east, along with minor riparian areas associated with these areas.
 - b) There is a possibility of human/wildlife interactions at the proposed location.
 - c) Living with wildlife provisions should be included in a development covenant to future landowners, in order to help homeowners deal with and avoid potential wildlife issues.

To minimize impacts of the subdivision on wildlife habitat, the following conditions shall be met:

- *Living with wildlife provisions shall be included in the covenants. (Condition 2)*
 - *To mitigate the impacts of light pollution stemming from new construction, the protective covenants shall include a provision recommending full cut-off lighting on new construction. (Condition 2)*
2. The Bald Eagle, Grey Wolf, and Townsend's Big Eared Bat were identified by the Montana Natural Heritage Program as species of concern within the same section as the subject property. Because the property does not have habitat supportive of these species, the subdivider requested and received a waiver from the requirement to submit a sensitive species report.

Conclusion of Law:

With the mitigating conditions of approval and requirements of final plan approval, impacts on wildlife & wildlife habitat will be reduced.

CRITERION 6: EFFECTS ON PUBLIC HEALTH & SAFETY

Findings of Fact:

1. The applicant is proposing to construct the internal road, Rudy's Way, to meet County standards. (See *Effects on Local Services*)

To mitigate impacts on traffic safety, the following conditions and requirements shall be met:

- *The applicants shall pay the pro rated share of the cost to improve the portion of Golf Course Road leading to the subdivision to meet County standards, as required by Section 5-4-5(d).*
 - *Section 3-4-4(a)(ii)(xiii) requires that the applicant submit an approach permit from the Road Department for the new approach off Golf Course Road..*
 - *The final plat shall show a no-ingress/egress zone along the Golf Course Road frontage of the subdivision, excepting the approach for the internal road, as approved by the Ravalli County Road and Bridge Department. A notification of this limitation of access shall be included in the notifications document. (Conditions 1 and 10)*
 - *A copy of the General Discharge Permit for Stormwater Associated with Construction Activity from the DEQ, evidence of a Ravalli County-approved road name petition for each new road, final road plans and grading and storm water drainage plan, road certifications, and a signed/notarized road maintenance agreement, and evidence that road improvements have been made in accordance with the conditions of approval and requirements of final plat approval are required by Section 3-4-4(a) of the RCSR prior to final plat approval.*
 - *A stop sign and road name sign shall be installed at the intersection of Golf Course Road and Rudy's Way. (Condition 12)*
 - *The subdivider shall apply for County-issued addresses and a provision requiring property owners to post County-issued addresses at their driveways shall be in the covenants. (Conditions 2 and 9)*
 - *The applicant shall provide evidence that a public road and utility easement covering the portion of the turnaround for Rudy's Way has been granted by the owners of Parcel D of COS#548660 (Condition 15)*
2. The proposed subdivision will be served by the Hamilton Rural Fire District, the Ravalli County Sheriff's Office, and the Marcus Daly Memorial Hospital EMS Department. (See *Effects on Local Services*)

To mitigate impacts on emergency providers, the following conditions shall be met:

- *A provision in the covenants shall recommend that all the buildings within the subdivision be built to International Residential Building Codes. (Condition 2)*
 - *The subdivider shall provide a letter from the Hamilton Rural Fire District stating that a contribution of \$500-per-unit for the two new units has been made prior to final plan approval. (Condition 5)*
 - *All accesses, including driveways to residences over 150' in length, must have a minimum unobstructed travel surface width of 22', a vertical clearance of 13'6" and an all-weather surface that can accommodate the weight of a fire truck. This statement shall be included in the covenants and on the final plat. (Conditions 2 and 6)*
 - *To mitigate impacts on the law enforcement, the subdivider shall submit an (amount-per-unit) contribution to the Ravalli County Treasurer's Office to be deposited into account for the Sheriff's Office prior to final plan approval. (Condition 7) (Staff Note: Since the current or planned level of service for the Sheriff's Office is unknown and the subdivider has not proposed any mitigation, Staff recommends the BCC negotiate an amount-per-unit with the subdivider.)*
3. The applicants are proposing individual wells and wastewater facilities. The applicants submitted water and sanitation information per MCA 76-3-622. The Ravalli County Environmental Health Department provided documentation indicating that they have received adequate information for local subdivision review to occur (Exhibit A-3).

Section 3-4-4(a)(ix) requires a DEQ Certificate of Subdivision Approval prior to final approval.

4. The preliminary plan and soils map indicate that the subdivision may have soils rated as severe for road and building construction.

To educate property owners and to mitigate potential impacts of this subdivision on public health & safety, a notification of the potential for severe soils shall be included in the notifications document filed with the Clerk & Recorder. A reduced plan showing the approximate locations of soils rated as severe for roads and building construction and descriptions of the severe soils in question shall be attached to the notifications document as an exhibit. (Condition 1)

5. To promote public health and safety, reduce energy consumption, and reduce impacts to nocturnal wildlife, full cut-off lighting is recommended for any new construction within this subdivision. (Condition 2)
6. According to a document titled *Radon and You, Promoting Public Awareness of Radon in Montana's Air and Ground Water* published by DEQ and the Montana Bureau of Mines and Geology, there is a high potential for radon in Ravalli County. To mitigate impacts on public health & safety, the covenants shall include a statement regarding radon exposure. (Condition 2)
7. The proposed subdivision is within the Ravalli County Airport Influence Area. Avigation easements are commonly used by airports to provide an easement and right-of-way for unobstructed passage of aircraft in, through, and across the airspace above the Grantor's property at a certain elevation.

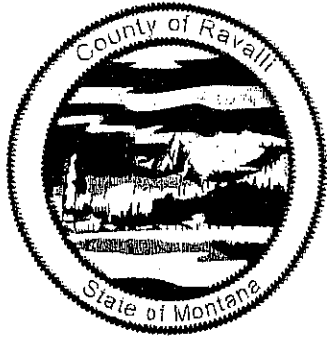
To mitigate impacts on local services, the following requirements and conditions shall be met:

- *An Avigation Easement, approved by the Ravalli County Airport Board, shall be granted by the subdivider to Ravalli County, unless written evidence from the Airport Board is provided indicating that an Avigation Easement is not necessary. (Condition 13)*
- *A notification of the proximity to the airport shall be included in the notifications document and on the final plat. The covenants shall include a provision regarding Airport Regulations. (Conditions 1, 2, and 14)*

Conclusion of Law:


The mitigating conditions and requirements of final plat approval will address impacts on public health & safety.

EXHIBIT A-1



ROAD AND BRIDGE DEPARTMENT
244 FAIRGROUNDS ROAD
HAMILTON, MONTANA 59840
TELE: 406.363.2733 • FAX: 406.363.6701

IC-06-11-1844
Ravalli County Planning

DATE 29 NOVEMBER 2006
TO RAVALLI COUNTY PLANNING DEPARTMENT
FROM DAVID H. OHNSTAD, COUNTY ROAD SUPERVISOR 
SUBJECT DONAKER ESTATES PRELIMINARY DESIGN REVIEW

Attached please find analysis and comment from Ravalli County's consulting engineers relative to the preliminary design submittal for the proposed Donaker Estates subdivision project. The Road & Bridge Department will approve this preliminary design, with the understanding and expectation that those issues identified in the consulting engineer's report of 27 November 2006 (attached) will be addressed appropriately and completely through the final design process.



**ENGINEERING
SURVEYING
PLANNING**

3021 Palmer • P.O. Box 16027 • Missoula, Montana 59808-6027

(406) 728-4611
FAX: (406) 728-2476
wgmgroup.com

DATE: November 27, 2006

TO: David Ohnstad, Ravalli County Road & Bridge Department

CC: Jon Horat, PE, Bitterroot Engineering

FROM: Jeremy W. Keene, P.E.

RE: Donaker Estates Preliminary Review Completion

On behalf of the Ravalli County Road and Bridge Department (RCRBD), we have completed our preliminary review of the above referenced project. Adequate road, grading, and drainage information has been submitted for the project. If the RCRBD is in concurrence with our review, please forward this letter to the Planning Office to be included with the full subdivision application.

A Preliminary Comment Memorandum was sent to the design engineer in accordance with Step 6 on the RCRBD's "Schedule of Activities – Processing & Coordination of Subdivision Projects" form. We are now sending this letter to your office in accordance with Step 7 of the RCRBD's Schedule of Activities to complete our preliminary review of the project.

We have included a copy of the following with this letter:

- 1) Preliminary comment memorandum from WGM Group
- 2) Preliminary comment response letter from Bitterroot Engineering & Design, Inc. with attachments

This review is based on the 2004 version of the AASHTO Geometric Design of Highways and Streets, the 2001 version of the AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT<400), and the Ravalli County Subdivision Regulations.

Review of the plans and reports are limited to general conformance with the Ravalli County Subdivision Regulations in place at the time the subdivision application was submitted. This is not a complete or comprehensive review of the design assumptions or conclusions of the design professional who submitted the plans and reports. A final set of construction plans will need to be submitted by the developer for review by the RCRBD prior to beginning construction.

Thank you for the opportunity to work with the Ravalli County Road Department. If you have any questions, please contact our office.



ENGINEERING
SURVEYING
PLANNING

3021 Palmer • PO Box 16027 • Missoula, MT 59808-6027

Phone: (406)728-4611
Fax: (406)728-2476
www.wgmgroup.com

DATE: August 21, 2006
TO: Jon Horat, PE, Bitterroot Engineering
CC: David Ohnstad, Ravalli County Road & Bridge Department
FROM: Jeremy W. Keene, P.E.
RE: Donaker Estates Preliminary Review Comments

On behalf of the Ravalli County Road and Bridge Department (RCRBD), our office has completed a review of the preliminary grading and drainage plans and reports submitted by your office. This review memorandum is part of Step 6 on the RCRBD's "Schedule of Activities – Processing & Coordination of Subdivision Projects" form. This review is based upon the Ravalli County subdivision regulations, the 2004 version of the AASHTO Geometric Design of Highways and Streets and the 2001 version of the AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT<400).

Based on our review, we have the following comments.

Roadways

- 1) At the intersection with Golf Course Road, sight triangles should be based on Chapter 9 of the AASHTO Green Book for the design speed on Golf Course Road.
- 2) No contours are shown for Golf Course Road. Please confirm that there is not a grade or vertical curve that would affect sight distance.
- 3) A pavement design is required for final plan review.

Storm Drainage

- 1) The storm drainage report does not include a discussion of offsite drainage areas that flow through the subdivision, as required by DEQ Circular 8.
- 2) Please confirm that the drainage structures will convey the 10-year flow without overtopping the roadway, and the 100-year flow without flooding any home site or drain field, per DEQ 8.

Please respond to these comments as outlined in Step 6 of the "Schedule of Activities – Processing & Coordination of Subdivision Projects" from the RCRBD. Thank you.

Bitterroot Engineering & Design, Inc.

November 20, 2006

1180 Eastside Hwy. Corvallis, MT 59828
(406) 961-5634 FAX (406) 961-5654

WGM Group
Attn: Jeremy Keene, PE
PO Box 16027
Missoula, MT 59808

REF: Donaker Estates, Hamilton, MT.

Dear Jeremy,

We received the comments dated August 21, 2006. The following items are addressed according to the letter.

Roadways:

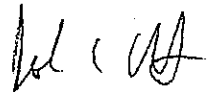
1. Sight triangles have been revised based on Chapter 9. 45 mph ✓
2. There are no significant topographical features which affect sight distance. ✓
3. A pavement design will be submitted for final plan review. ✓

Storm Drainage.

1. See revised storm drainage report. ✓
2. See revised storm drainage report with calculations ✓

If you have any questions, please give us a call.

Sincerely,
BITTERROOT ENGINEERING AND DESIGN, INC.



By John C. Horat, PE

RECEIVED
NOV 21 2006

WGM GROUP, INC

060601

STORM DRAINAGE REPORT

for
Donaker Estates

located at

A Portion of Section 32 T6N, R20W, Ravalli County, Montana
Hamilton, Montana

prepared 11/20/06
for
Rudy Kratofil
545 Golf Course Road
Hamilton, MT 59840

By
John Horat, PE
Bitterroot Engineering & Design, Inc.
Job # 5109
1180 Eastside Highway
Corvallis, MT 59828
(406)961-5634 FAX 961-5654

CONTENTS

Legal Description	pg. 1
Introduction	pg. 2
Maintenance Plan	pg. 2
On Site Storm Drain Plan	pg. 3
Specifications	pg. 4
Calculations	pg. 5

INTRODUCTION:

This report details the design of a storm drainage plan for a subdivision located off Golf Course Road just east of the City of Hamilton. The site is bordered to the all directions but the north by residential development. The north is bordered by Golf Course Road. The proposed subdivision is for five (5) residential lots on five (5) acres. One new road is proposed to serve the proposed subdivision.

No significant off site water is anticipated as there is constructed road with ditches approximately three hundred (300) feet above the proposed subdivision. This road captures additional off site storm water and transports it to the west. About six (6) acres of potential residential land could drain surface water into this development. At the time of development, they will be required to construct storm drainage facilities for their development.

In summary, the following improvements are anticipated for the proposed subdivision. Drainage ditches along the roadways will transport excess storm water to two (2) infiltration basins. See site map. The existing culvert at the proposed entrance will be extended to accommodate the proposed road section.

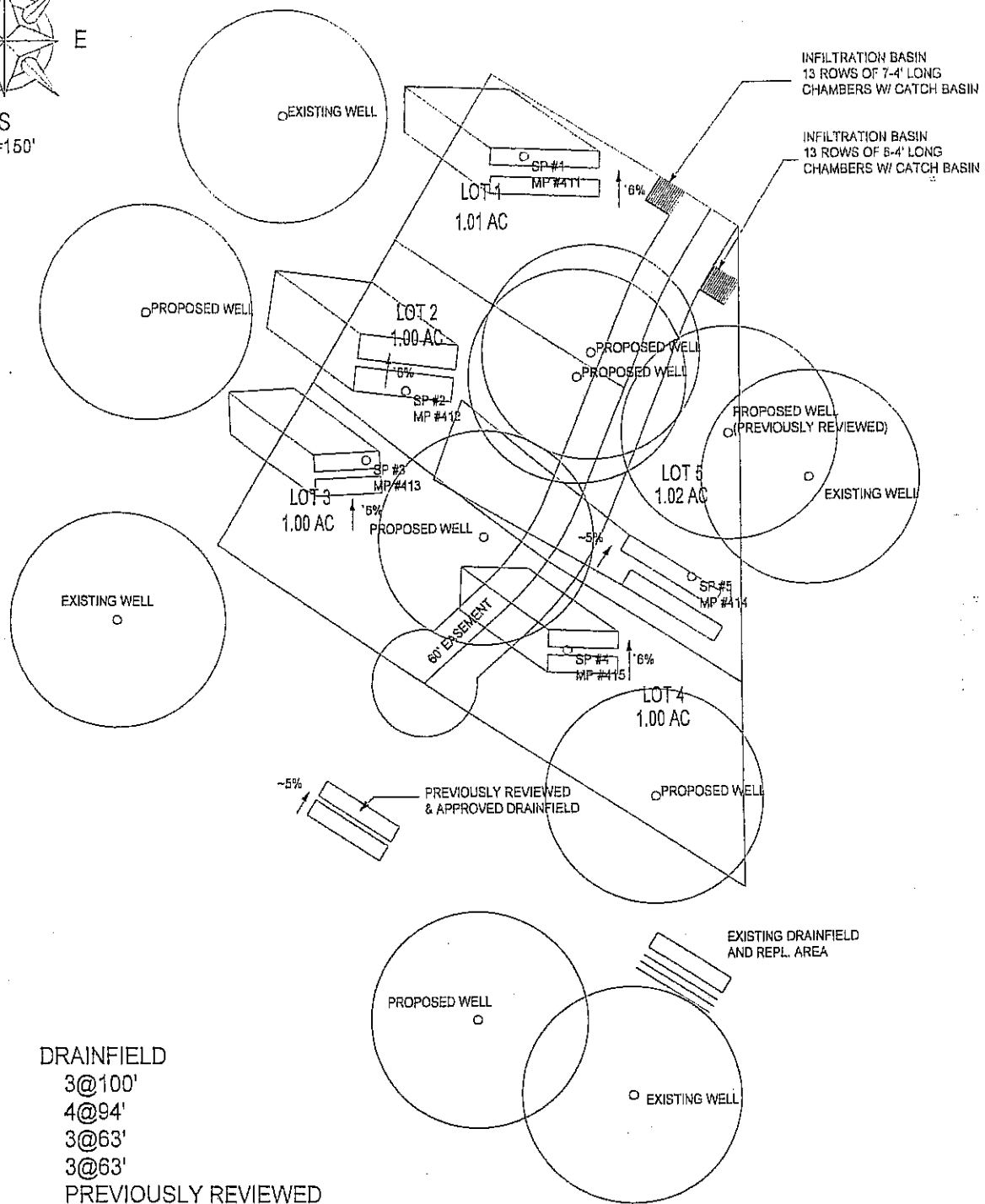
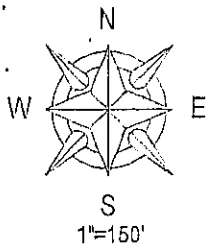
The basins are not sized to contain the 100 year event. During the 100 year event, excess storm water will flow overland and continue westerly along Golf Course Road.

Wells and septic systems existing or proposed within 200 feet of the proposed basins should not be impacted.

MAINTENANCE PLAN

The infiltration basins are proposed to be maintained by the proposed Homeowners Association. The Homeowner's Association will be initially operated by Rudy Kratofil.

Semiannual maintenance is anticipated to be removal of sediment in roadside ditches and drainage inlets. Weed mowing in and around the drainage basins shall be performed to allow for adequate storage capacity in the basins.



KRATOFIL LOTS

RAVALLI COUNTY
SECT 32 T6N, R20W
BE&D JOB # 5109
6/27/06

SPECIFICATIONS

1. Re-seeding of disturbed areas shall be accomplished in accordance with the approved Weed Control Plan.
2. Contractor shall contact Underground Alert prior to any excavations.
3. Road construction shall be in conformance with the Ravalli County Subdivision Regulations.

Calculations

Typical Lot Drainage Calculations (2 year – 1 hour event)

House and Garage Runoff

$$2,000 \text{ s.f.} \times 60\% \times 0.38 \text{ in./12 in./ft.} = 38 \text{ c.f.}$$

Typical Driveway

$$50' \times 20' \times 60\% \times .38 \text{ in./12 in./ft.} = 19 \text{ c.f.}$$

Lawn area

$$60' \times 60' \times -20\% \times .38 \text{ in./12 in./ft.} = -23 \text{ c.f.}$$

Additional Runoff Per Lot

$$38 + 19 - 23 = 34 \text{ c.f.}$$

Basin Sizing Calculations (Increase Development Runoff for 2 year – 1 hour storm)

Basin No. 1 (Located on Lot 5) – 2 Lots

Additional Runoff From Lots

$$2 \text{ lots} \times 34 \text{ c.f./lot} = 68 \text{ c.f.}$$

Additional Runoff From Road

$$560' \times 25' \times 60\% \times .38 \text{ in./12 in./ft.} = 266 \text{ c.f.}$$

Total Runoff

$$266 + 68 = 334 \text{ c.f.}$$

Utilize infiltrator chambers for storage.

Try 78 chambers. $78 \times 4.3 \text{ c.f./chamber} = 335 \text{ c.f.}$ Ok.

Utilize 13 rows of 6 chambers

Area = $26' \times 24'$.

Basin No. 2 (Located on Lot 1) – 3 Lots

Additional Runoff From Lots

$$3 \text{ lots} \times 34 \text{ c.f./lot} = 102 \text{ c.f.}$$

Additional Runoff From Road

$$560' \times 25' \times 60\% \times .38 \text{ in./12 in./ft.} = 266 \text{ c.f.}$$

Total Runoff

$$266 + 102 = 368 \text{ c.f.}$$

Utilize infiltrator chambers for storage.

Try 91 chambers. $91 \times 4.3 \text{ c.f./chamber} = 391 \text{ c.f.}$ Ok.

Utilize 13 rows of 7 chambers

Area = $26' \times 28'$.

Proposed Roadside Ditches

$$Q = c \times i \times a$$

$c = 0.34$ single family residences

$c = 0.80$ roads

10 Year – 1 hour:

Worst Case – west side of road

On site 10 year – 1 hour storm: $i = 0.72$ in./hr.

Number of houses = 3 @ 2,500 s.f./house

Driveways = $40' \times 16' = 640$ s.f./lot

Landscaping area = 3,000 s.f./lot

Road = $550' \times 30' = 16,500$ s.f.

$$Q_{10} = c \times i \times a$$

$$= Q_{\text{lots}} + Q_{\text{roads}}$$

$$= (.34 \times .72 \times 3) + (.8 \times .72 \times .38) \text{ cfs}$$

$$= .73 + .22 \text{ cfs}$$

$$= 1.0 \text{ cfs}$$

100 Year – 1 hour:

Worst Case – west side of road

On site 100 year – 1 hour storm: $i = 1.14$ in./hr.

Number of houses = 3 @ 2,500 s.f./house

Driveways = $40' \times 16' = 640$ s.f./lot

Landscaping area = 3,000 s.f./lot

Road = $550' \times 30' = 16,500$ s.f.

$$Q_{100} = c_f \times c \times i \times a \text{ where } c_f = 1.25$$

$$Q_{100} = c \times i \times a$$

$$= Q_{\text{lots}} + Q_{\text{roads}}$$

$$= (1.25 \times .34 \times 1.14 \times 3) + (1.25 \times .8 \times 1.14 \times .38) \text{ cfs}$$

$$= 1.45 + .43 \text{ cfs}$$

$$= 1.9 \text{ cfs}$$

[illegible]

Especially prepared for:

[illegible][illegible]

Advanced Engineering Software [AES]
SERIAL No. IO564I
REV. 2.0 RELEASE DATE:12/30/82

[illegible]

>>>>CHANNEL INPUT INFORMATION<<<<

```
CHANNEL Z(HORIZONTAL/VERTICAL) = .50
BASEWIDTH( FEET) = .00
CONSTANT CHANNEL SLOPE( FEET/FEET) = .033000
UNIFORM FLOW(CFS) = 1.90
MANNINGS FRICTION FACTOR = .0350
```

NORMAL-DEPTH FLOW INFORMATION:

```
>>>> NORMAL DEPTH(FEET) =      1.12
FLOW TOP- WIDTH(FEET) =          1.12
FLOW AREA(SQUARE FEET) =          .62
```

HYDRAULIC DEPTH(FEET) = .56
FLOW AVERAGE VELOCITY(FEET/SEC.) = 3.05
UNIFORM FROUDE NUMBER = .720
PRESSURE + MOMENTUM(POUNDS) = 25.69
AVERAGED VELOCITY HEAD(FEET) = .145
SPECIFIC ENERGY(FEET) = 1.260

=====

CRITICAL-DEPTH FLOW INFORMATION:

CRITICAL FLOW TOP-WIDTH(FEET) = .98
CRITICAL FLOW AREA(SQUARE FEET) = .48
CRITICAL FLOW HYDRAULIC DEPTH(FEET) = .49
CRITICAL FLOW AVERAGE VELOCITY(FEET/SEC.) = 3.97
CRITICAL DEPTH(FEET) = .98
CRITICAL FLOW PRESSURE + MOMENTUM(POUNDS) = 24.36
AVERAGED CRITICAL FLOW VELOCITY HEAD(FEET) = .244
CRITICAL FLOW SPECIFIC ENERGY(FEET) = 1.223

=====

=====

RAVALLI COUNTY ROAD & BRIDGE DEPARTMENT

SCHEDULE FOR ROADWAY DESIGN SUBMITTAL

DATE <u>4/25/06</u>	PROJECT DESIGN BY <u>JOHN HURAT, PE</u>	
PROJECT NAME <u>OSNAKER SUBDIVISION</u>		PRELIM DESIGN <u>X</u>
ROADWAY NAME <u>UNKNOWN</u>		FINAL DESIGN <u> </u>
STATION (OR LOCATION) FROM <u>1+00</u> TO <u>END OF CD-S</u>		
PROPOSED DESIGN		REFERENCE
DESIGN ADT <u>50</u> % TRUCKS <u> </u>		<u>ITE MATHUR</u>
DESIGN SPEED <u>25 MPH</u> POSTED SPEED <u>NONE</u>		<u>Pg 9 - Low Volume</u>
FUNCTIONAL CLASSIFICATION <u>Very Low Volume Local</u>		<u>SUB RECS. MAP 2</u>
TERRAIN - FLAT <u> </u> ROLLING <u>X</u> MOUNTAINOUS <u> </u>		<u>P. 231 - "Green Book"</u>
GEOMETRIC - ALIGNMENT		
HORIZONTAL CURVATURE - MINIMUM RADIUS <u>250'</u>		<u>EXHIBIT B</u>
MAXIMUM DESIGN GRADE <u>9%</u>		<u>10% Max. Sub Recd</u>
MINIMUM STOPPING SIGHT DISTANCE <u>115'</u>		<u>EXHIBIT 8</u>
VERTICAL CURVATURE		
CREST K VALUE <u>7</u> / SAG K VALUE <u>10</u>		<u>EXHIBIT 12 Low Volume</u>
SUPER-ELEVATION (%) <u>N.A.</u>		<u>N.A.</u>
INTERSECTION DESIGN <u>STOP CONTROL MINOR ROAD</u>		<u>P. 46 - Low Volume</u>
INTERSECTION CASE TYPE <u>III STOP CONTROL ON MINOR RD.</u>		<u>P. 46 - Low Volume</u>
SIGHT TRIANGLE DISTANCE - A) <u>14''</u> B) <u>500''</u>		<u>CHAPTER 9</u>
EASEMENT WIDTH <u>60'</u>		<u>TABLE B-1, SUB RECS</u>
ROADWAY WIDTH - PAVEMENT <u>18'</u> SHOULDER <u>2' EXISTING</u>		<u>"</u>
PARKING PROVIDED / ALLOWED - YES <u> </u> NO <u>X</u>		<u> </u>
BICYCLE / PEDESTRIAN FACILITIES - YES <u> </u> NO <u>X</u>		<u> </u>

PROPOSED DESIGN	REFERENCE
STRUCTURAL - GEOTECHNICAL	
EXISTING SUB-GRADE SOIL TYPE _____	To Be Determined
EQUIVILANT S/A LOAD _____	" "
RESILIENT VALUE _____	" "
SUB-BASE COURSE - TYPE <u>T.B.D.</u> DEPTH <u>T.B.D.</u>	MPWSS
BASE COURSE - TYPE <u>3/4" MINUS</u> DEPTH <u>T.B.D.</u>	"
SURFACE TYPE - ACP <input checked="" type="checkbox"/> BST <input type="checkbox"/> OTHER _____	"
SURFACE TYPE - DESIGN _____ DEPTH _____	To Be Determined
STRUCTURAL NUMBER _____	" "
NOTES	

INSTRUCTIONS

Complete all applicable sections; identify the specific source reference for the design (AASHTO "Green Book", AASHTO Low Volume, AASHTO Pavement Design, MUTCD, MPWSS) by section number. Identify any design exceptions and attach appropriate documentation. Attach any geotechnical, structural design and hydrology analysis.

Grading and drainage design plans are also required, which may be reviewed by the county's consulting engineer at the request of the County Planning Department. If included in this review process, such design plans as prepared for the Montana Department of Environmental Quality, or other regulatory agency, shall be submitted at the time of final design review. The design of any roadway structures (bridges) that are proposed shall also be submitted in appropriate format for review.

Attach any information that may be required to support the design proposal. The county's engineer will review the submittal for compliance to adopted standards but will not review for accuracy of calculations or engineering judgment. In submitting a proposal, the project designer shall certify as to the accuracy of the proposed design.

INCOMPLETE SUBMITTALS WILL NOT BE PROCESSED

Renee Van Hoven

From: Karen Hughes
Sent: Thursday, January 11, 2007 8:21 AM
To: Jennifer Degroot; John Lavey; Laura Hendrix; Planning; Renee Van Hoven; Shaun Morrell; Tristan Riddell; Vanessa Perry
Subject: FW: Potential Montana PM2.5 Non-Attainment Areas
Importance: High
Attachments: PM25_NAAQS_MT_Review_Rev.doc

Interesting.

*Karen Hughes, AICP
Ravalli County Planning Department
215 S. 4th Street Ste F
Hamilton, MT 59840
Phone (406) 375-6530
Fax (406) 375-6531
khughes@ravalliacounty.mt.gov*

From: Planning
Sent: Thursday, January 11, 2007 8:15 AM
To: Karen Hughes
Subject: FW: Potential Montana PM2.5 Non-Attainment Areas
Importance: High

From: Jeffrey, Robert [mailto:rjeffrey@mt.gov]
Sent: Wednesday, January 10, 2007 5:22 PM
To: Ben Schmidt; Cascade Sanitarians; Cherry Loney; Dan Dennehy; Dan Powers; Eric Englebert; Jan Scher; Jennifer Pinnow; Jim Carlson; Joe Russell; Kathy Moore; Morgan Farrell; Paul Riley; Rick Larson; Ron Anderson; Russ Boschee; Shannon Therriault; Stephanie Nelson; Ted Kylander; Wendee Jacobs; Andy Hunthausen; Barbara Evans; Bill Carey; BSB Commission; Chris Kukulski; City Commission; City Council; City Council; City Council; City Council; County Commission; County Commission; County Commission; Glenda Wiles; Ed Tinsley; Gary Marks; Jean Curtiss; Jeff Krauss; Jim Smith; Mike Murray; Paul Babb; Planning; Ron Alles; Tim Burton; Andy Epple; Ben Rangel; Bob Horne; Candi Beaudry; Charlie Johnson; Chris Saunders; Cloud, Bill; Cynthia Wulfekuhle; Dave Dobbs; David Mumford; David Ohnstad; Debbie Arkell; Duke, Becky; Eric Griffin; Frank Rives; Gregory Robertson; Helm, Cora; Henry Hathaway; James Hansz; Jason Karp; Jean Pentecost; Jeff Harris; Jim Rearden; Joesph Menicucci; John Rundquist; John VanDaveer; John Wilson; Karen Hughes; Kevin McGovern; Mike Kress; Rick Hixson; Ryan Leland; Scott Walker; Sesso, Jon; Steve King; Steyaert, Tom; Straehl, Sandra; Turner, Dick; Vern Heisler; Zanto, Lynn (MDT); Bob Rebarchik; Craig Glazier; Dan Redline; Dave Grace; Dave Krueger; Dusty Pence; McLeod, Scott; Myron Hotinger; Paul Wagner; Steve Hayes; Thomas Dzomba
Cc: Vidrine, Don; Habeck, Bob; Coefield, John; Erp, Elton
Subject: Potential Montana PM2.5 Non-Attainment Areas
Importance: High

Dear Interested Party:

The U.S. Environmental Protection Agency (EPA) recently revised the National Ambient Air Quality

Standards (NAAQS) for particulate matter (PM). As you may know, the NAAQS are standards set to protect public health and welfare. The federal Clean Air Act requires EPA to review the latest scientific information and revise the NAAQS, as needed, for all criteria air pollutants every five years. The final rules for the revised PM NAAQS were published in the Federal Register at 71 FR 61144 on 17 October 2006, and became effective on 18 December 2006.

The Montana Department of Environmental Quality (DEQ) has reviewed the revised PM NAAQS and the ambient air quality data that's been collected around the state for the last several years. DEQ has identified four Montana communities with a high probability of failing to meet new PM NAAQS. Based on air monitoring data collected from 2003 through 2005, DEQ currently projects violations of the 24-hour PM2.5 NAAQS in the Missoula, Libby, Hamilton and Butte areas. The data also indicates that the Helena, Flathead and Gallatin Valleys are dangerously close to violating the 24-hour PM2.5 NAAQS. These projections will be updated as new monitoring data becomes available. The Libby area is currently designated a non-attainment area (NAA) for exceeding the annual standard based on the former 1997 PM NAAQS. I've attached a document summarizing some of the issues with the new PM NAAQS and PM data for several Montana communities.

In late 2008, based on ambient air monitoring data collected in 2005, 2006, and 2007, DEQ must notify EPA as to whether or not local Montana communities are complying with the PM NAAQS. Federally enforceable control plans must be submitted for EPA's approval for those Montana communities found in violation of any NAAQS. In a proactive attempt to prevent the designation of new NAAs, DEQ would like to work with local air pollution control agencies, the regulated community, and other interested parties to identify and control sources of particle air pollution. DEQ representatives are willing to meet with interested parties in their communities at mutually agreed upon dates and times. In addition to the PM NAAQS discussion, other air quality topics of interest could be discussed.

If interested, please contact myself or Bob Habeck (bhabeck@mt.gov or 444-7305) to schedule a meeting.

Thank you for your efforts in protecting Montana's clean air resources.

Robert K. Jeffrey
Air Quality Specialist
Air Resources Management Bureau
MT Dept. of Environmental Quality
(406) 444-5280; fax 444-1499
Email: rjeffrey@mt.gov

<<PM25_NAAQS_MT_Review_Rev.doc>>



RECEIVED

DEC 13 2005

Ravalli County Planning Dep.

1C 05 12 2208

Environmental Health
215 South 4th - Suite D
Hamilton, MT 59840
(406)375-6268 FAX (406)375-2048

MEMORANDUM

TO: Ravalli County Planning Department

FROM: Morgan T. Farrell, R.S., Environmental Health

DATE: 12-12-05

RE: KRATON LOTS

The Ravalli County Environmental Health Department has received the above-referenced proposal for review. Based on the information provided, the application appears to be sufficient for subdivision review. The Sanitation in Subdivision review will be completed in accordance with the contract with the Department of Environmental Quality. Additional questions or comments may be required based upon the continued review of this file and the content of future submittals.



**Montana
Wildlife & Parks**

EXHIBIT A-4

Region 2 Office
3201 Spurgin Road
Missoula, MT 59804-3099
406-542-5500
September 13, 2005

Leonard Shepherd
Shepherd Survey
320 Adirondac Ave.
Hamilton, MT 59840

Dear Mr. Shepherd:

Reference: Donaker Estates (Kratofil)--Minor (5 lots on ~5.0 acres) subdivision, east of
Hamilton

We have reviewed the preliminary plat and topographic map for this subdivision, and our comments follow.

Although the proposed subdivision is located in the fringe of an area that is becoming built out, it is near natural drainage features to the north and south, and the Hedge Ditch to the east, along with minor riparian areas associated with these areas. Agricultural lands are also nearby. We believe there is a possibility of human/wildlife interactions at this location. In particular, wildlife such as white-tailed deer, fox and skunks could be found in the area, as well as an occasional black bear. Numerous small mammal and bird species could be found nearby. We feel that minimal "living with wildlife" issues should be conveyed as part of the covenants to future landowners in this subdivision, in order to help homeowners deal with and avoid potential wildlife issues.

Attached is a possible version of such covenants. Please contact Sharon Rose at our office (542-5540; shrose@state.mt.us) if you would like an electronic version of these comments. Thank you for providing the opportunity for MFWP to comment on this subdivision.

Sincerely,

/s/ Mack Long SDR

Mack Long
Regional Supervisor

ML/sr

Enclosure: "Living with Wildlife" covenants

C: Ravalli County Planning Department, Attn: Karen Hughes, 215 S. 4 St., Ste. F, Hamilton, MT 59840

Section __: Living with Wildlife

Homeowners must accept the responsibility of living with wildlife and must be responsible for protecting their vegetation from damage, confining their pets, and properly storing garbage, pet food, livestock feed and other potential attractants. Homeowners must be aware of potential problems associated with the occasional presence of wildlife such as deer, black bear, mountain lion, coyote, fox, skunk and raccoon. Contact the Montana Fish, Wildlife & Parks office in Missoula (3201 Spurgin Road, Missoula, MT 59804) for brochures that can help homeowners "live with wildlife." Alternatively, see the Education portion of FWP's web site at www.fwp.mt.gov.

The following covenants are designed to help minimize problems that homeowners could have with wildlife, as well as helping homeowners protect themselves, their property and the wildlife that Montanans value.

1. There is potential for **vegetation damage by wildlife, particularly from deer** feeding on green lawns, gardens, flowers, ornamental shrubs and trees in this subdivision. Homeowners must be aware of this potential damage. They should be prepared to take the responsibility to plant non-palatable vegetation or protect their vegetation (fencing, netting, repellents) in order to avoid problems. Homeowners should consider landscaping with native vegetation that is less likely to suffer extensive feeding damage by deer.
2. **Garbage** should be stored in secure animal-resistant containers or indoors to avoid attracting animals such as bears, raccoons, dogs, etc. If stored indoors, do not set trash out until the morning of pick-up.
3. **Do not feed wildlife** or offer supplements (such as salt blocks), attractants, or bait for deer or other wildlife. Feeding wildlife results in unnatural concentrations of animals that could lead to overuse of vegetation and disease transmission. Such actions unnecessarily accustom wild animals to humans, which can be dangerous for both. It is against state law (MCA 87-3-130) to purposely or knowingly attract bears with supplemental food attractants (any food, garbage, or other attractant for game animals) or to provide supplemental feed attractants in a manner that results in "an artificial concentration of game animals that may potentially contribute to the transmission of disease or that constitutes a threat to public safety." Also, homeowners must be aware that deer might occasionally attract mountain lions to the area.
4. **Pets** must be confined to the house, in a fenced yard, or in an outdoor kennel area when not under the immediate control of the owner, and not be allowed to roam as they can chase and kill big game and small birds and mammals. Keeping pets confined also helps protect them from predatory wildlife. Under current state law it is illegal for dogs to chase hooded game animals and the owner may also be held guilty (MCA 87-3-124).

5. Consider **boundary fencing** that is no higher than 3-1/2 feet (at the top rail or wire) and no lower than 18 inches (at the bottom rail or wire) in order to facilitate wildlife movement and help avoid animals such as deer becoming entangled in the fence or injuring themselves when trying to jump the fence.

EXHIBIT A-5

SEP 13 2005

Hamilton
Rural Fire
DISTRICT

Ravalli County Planning Dept.

IC-05-09-1707

Post Office Box 1994 Hamilton, MT 59840

FIRE PROTECTION STANDARDS

The following Fire Protection Standards were adopted on September 6, 2005.

The Hamilton Rural Fire District has established the Fire Protection Standards for proposed new subdivisions within the district. The requirements were established with consideration for the life and safety of the residents of the district, as well as the volunteer firemen who protect the district, and to mitigate possible harm to the general public.

In establishing the requirements, emphasis was given to the NFPA 1, Chapter 18, The Ravalli County Subdivision Regulations, The Ravalli County Road Department Standards, and the 1993 Fire Protection Guidelines for Wildland Residential Interface Development. These Publications and Articles establish rules for dealing with fire apparatus access roads, fire department access to buildings, water supplies for fire protection, installation and maintenance of fire - protection systems and clearance of brush and vegetative growth from roadways.

Consideration was also given to Section 23.7.105 Administrative Rules of Montana, which is adopted pursuant to authority of 50-3-102 (2) and 50-3-103, MCA, which incorporates by reference the NFPA 1, Chapter 18, and establishes a minimum fire prevention code for Montana.

Every effort has been made to use words and phrases consistent with the definitions given in the above-mentioned publications.

ACCESS ROADS

The Fire District requires that all roads and bridges meet or exceed, and are maintained to, the requirements of the NFPA 1, Chapter 18, which reads in part:

18.2.2.3.1 Required Access. Fire Apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction when any portion of the facility or any portion of an exterior wall of the first story of the building is located more than 150 feet (45720 mm) from fire apparatus access as measured by an approved route around the exterior of the building or facility.

In order to obtain and maintain a Class 5 ISO rating, the Hamilton Volunteer Fire Department is required to flow 500 gallons and maintain this flow for 120 minutes. By ISO standards this is usually sufficient to protect single-family dwellings with adequate spacing between structures. ISO uses the following flow rates, from their *Guide for Determination of Needed Fire Flow*, Chapter 7, when considering adequate coverage for density:

Distance Between Buildings	Needed Fire Flow
More than 100'	500 gpm
31 - 100'	750 gpm
11 - 30'	1,000 gpm
10' or less	1,500 gpm

The Hamilton Rural Fire District will use these fire flows for all subdivisions of single-family dwellings with less than 10 lots. All developments of single-family dwellings with 10 or more lots require a minimum of 1,000 gallons per minute. All commercial, industrial, or multi-family dwellings requiring higher fire flows will have to be engineered by the developer to determine needed fire flows.

Any development in the rural area, with density requiring more than the 500 gallons per minute being supplied by the Hamilton Volunteer Fire Department, will be requested to supply the difference. The water supply installation, upkeep and maintenance will be the responsibility of the Subdivision, pursuant to NFPA 1, Section 18.3.5.

The Fire District realizes the financial burden of installing and maintaining a water supply and or storage tanks capable of providing the required water flows and is willing to accept a voluntary contribution payment of \$500.00 (Five Hundred Dollars) per lot, in lieu of the water supply required by the NFPA 1. Payment of \$500.00 per lot will be due upon approval of the subdivision. The Fire District will use funds paid in lieu of the water supply required by the NFPA 1 to maintain or improve fire protection within the district, for the development of water supplies, or capital improvements.

EXCEPTIONS: 1. When all buildings in the subdivision are completely protected with an approved automatic sprinkler system, the above listed water supply and in lieu of payment schedule may be reduced by 50% (fifty percent). The Subdivision Covenants must state that "All residences constructed within the subdivision will be protected with an approved automatic sprinkler system." Payment for the reduced amount of \$250.00 per lot will be accepted at the time the Subdivision is approved. If at any time any residence is built within the subdivision without an approved sprinkler system, all lots will be subject to an additional \$250.00 payment, regardless of whether they have sprinklers in residences located on them or not.